

Date: Wednesday, 3/8/2006 10:38:32 AM
 User: Kim Johnston

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: INLET VALVE SHAFT
Job Number	: 26123		
Estimate Number	: 12251		
P.O. Number	: N/A	Part Number	: D34745
This Issue	: 3/8/2006	S.O. No.	: N/A
Prsht Rev.	: NC	Drawing Number	: D3474 REV.A
First Issue	: N/A	Project Number	: N/A
Previous Run	: N/A	Drawing Revision	: A
	Type : MACHINED PARTS	Material	: N/A
Written By	: <u>See Comment Below</u>	Due Date	: 3/31/2006
Checked & Approved By	: <u>06.03.08</u>	Qty:	20
Comment	: est rev. A 06.02.07 New issue EC	Um:	Each

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	OUTSIDE SERVICE	OUTSIDE SERVICES
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**Comment:** Sub-Contracting OUTSIDE SERVICES

Issue P/O: 00000768

Email or Ship DXF file to vendor

Laser Cut per Dwg D3474 flat pattern D3474-5F

Material release note required

AP 06/03/09

AP 06/03/09

2.0	D34745F	Valve flat pattern
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 12.0000 Each(s)
 ARM

3.0	PACKAGING 1	PACKAGING RESOURCE #1
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**Comment:** PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage

Ensure material certification is attached

AP 06.03.22 (20)

4.0	QC6	DIMENSIONAL CHECK
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**Comment:** DIMENSIONAL CHECK

AP 06.03.22

5.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
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**Comment:** SMALL & MEDIUM FAB RESOURCE 1

Deburr if necessary.

AP 06.03.22 (20)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: DP Date: 26/03/27
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 3/8/2006 10:38:32 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: INLET VALVE SHAFT

Job Number: 26123

Part Number: D34745

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC5

INSPECT WORK TO CURRENT STEP



2006-03-25

Comment: INSPECT WORK TO CURRENT STEP

7.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

2006-03-29

8.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

2006-03-29

Job Completion



2006-03-29

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

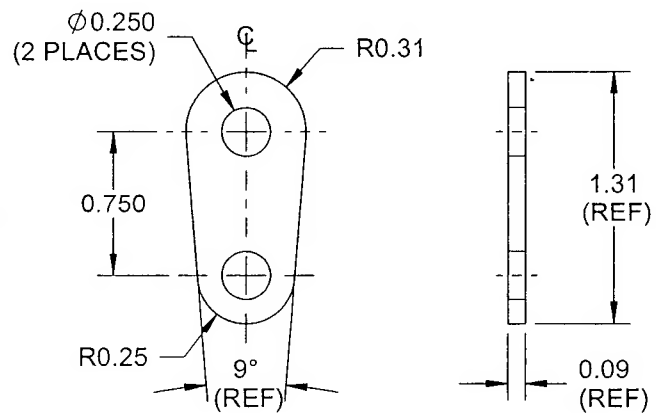
NOTE: Date & initial all entries

PRELIMINARY ISSUE

DESIGN [Signature]	DRAWN BY [Signature]	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO. D3474	REV. A SHEET 3 OF 4
DATE 03.01.23		TITLE INLET VALVE SHAFT	SCALE 1:1

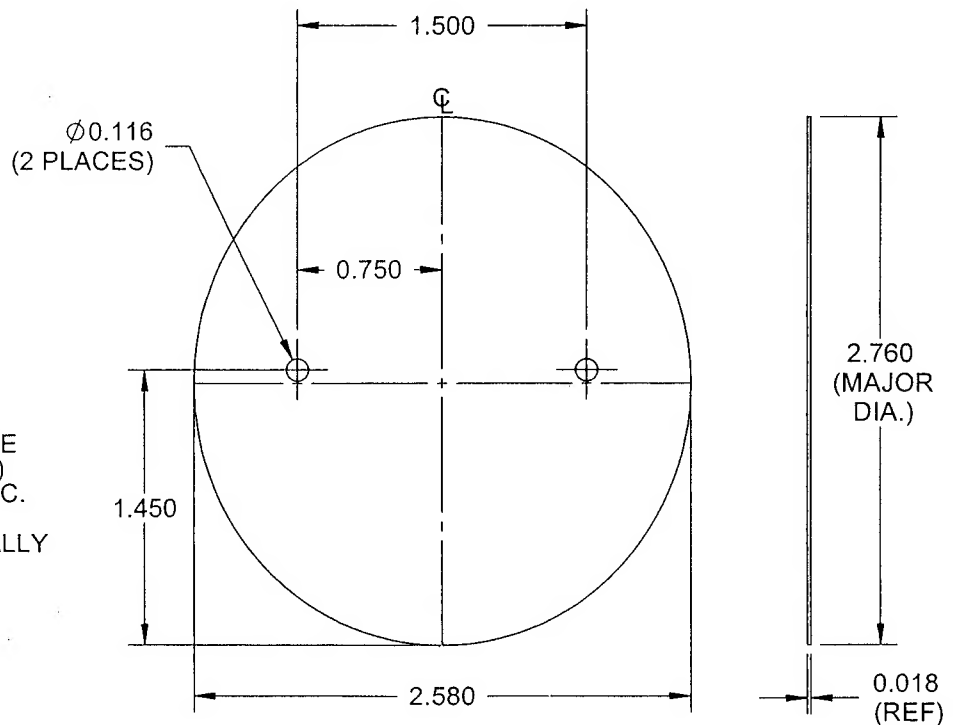
D3474-3 ARM FLAT PATTERN

- 1) MATERIAL: AISI 304/316 SS SHEET PER MIL-S-5019 (ANNEALED) 2B FINISH 13 GAUGE SS (0.090 THICK) (REF. DART SPEC. M304S26GA)
- 2) FINISH: NONE.



D3474-5 PLATE VALVE FLAT PATTERN

- 1) MATERIAL: AISI 304/316 SS SHEET PER MIL-S-5019 (ANNEALED) 2B FINISH 26 GAUGE SS (0.018 THICK) (REF. DART SPEC. M304S26GA)
- 2) FINISH: ELECTRO CHEMICALLY POLISHED.



NOTES:

- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010

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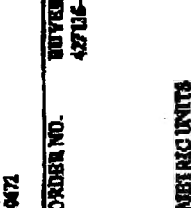
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Ryerson

MAY-17-2005 18:05

☒ 002
☒ 001/004

3/13/66
604-946-453. DTN; PETE

		AK Steel Corporation		Page 1							
		Metallurgical Test Report Coastcon Works Coelestown, OH 43812									
INTEGRIS METALS PO BOX 340 MINNEAPOLIS, MN 55440		INTEGRIS METALS 308 1ST STREET ALBUQUERQUE, NM 98001		MILL ORDER NO. 772186-0191 PA HT NO. 74151497 ORDER NO. 447136-91 BUYER'S ORDER NO. 427116-01							
C U S T O M E R		S H T P T O		5 INTEGRIS METALS 308 1ST STREET ALBUQUERQUE, NM 98001							
SKID ID SK 0715143 SK 0715144 SK 0715145 SK 0715146 TOTAL SKIDS 4		HEAT 7150151 7150151 7150151 7150151		PARENT COIL ID 6544919-01 6544919-01 6544919-01 6544919-01							
NET WEIGHT 3,465 LBS. 402 KG. 3,478 LBS. 403 KG. 3,451 LBS. 400 KG. 3,441 LBS. 397 KG. TOTAL NET WEIGHT 13,844 LBS. 1507 KG.		NET WEIGHT 3,465 LBS. 402 KG. 3,478 LBS. 403 KG. 3,451 LBS. 400 KG. 3,441 LBS. 397 KG. TOTAL NET WEIGHT 13,844 LBS. 1507 KG.		TENSILE UNITS - PRODUCT - METRIC UNITS 118,000 43,000 X COIL							
L-Label Analysis of Heat P-Product Analytical Patent Copy CHEMICAL ANALYSIS											
ID	C	MMN	P	S	SI	CR	NI	MO	N	CU	CO
L 720151	.049	1.39	.027	.501	.35	1.8.18	8.05	.35	.04	.30	.12
SHIPPING DATE: 09/13/2005 REMARKER NO INTENTIONAL ADDITIONS OF MERCURY OR MERCURY COMPOUNDS, RADIUM, ALPHA SOURCE, AND LOW MELTING ALLOYS OR ELEMENTS CAPABLE OF FORMING LOW MELTING ALLOYS WERE MADE THROUGHOUT THE PROCESSING OF THIS MATERIAL.											
PRODUCT DESCRIPTION CR SET TYPE 304 STAINLESS STEEL FINISH SLIT EDGE 1/2" DIA 31.5" ALL TEST REFS HAVE BEEN MET UNLESS NOTED TO OR NOTED OTHERWISE * A STA 240 -04 EX PARA 3.1.3 COILS WILL BE DETERMINED BY ASTM E 9 * ASTM A 490 -01 EX PARA 19.1.1 COILS WILL BE DETERMINED BY ASTM E 9 EX PARA 26.1.1.3 COIL WILL BE TAPPED ON OUTSIDE ONLY * ASTM A 566 -03 * DP-001 Rev 0, * IS-011 0 * BUYER PART# 74251497 * ASME SA-240 SECTION II PART B (2001 ED, 2002 ADDENDA) EX PARA 3.1.3 COILS WILL BE DETERMINED BY ASTM E 9 * EN-10204 3.1.5											
PARENT COIL ID	FOR (P/B)	DIR (L, T, D)	COND	2 INCH MEASURED	TENSILE STRENGTH (KSI)	YS. % OFFSET (KSI)	ELONG. 2 INCH	REDUCED	ROCKWELL HARDNESS	ROCKWELL HARDNESS	ROCKWELL HARDNESS
720151					72.2	37.1	2.2	14.5	72	74	74

Fax Server

T-726 P.008/015 F-527

03/17/2006 14:18 FAX 6042729137

MATERIAL TEST REPORT

From: NORTH AMERICAN STAINLESS CANADA, IN
740 IMPERIAL ROAD NORTH

Page : 1
Heat/Lot : 86K8
TIN : B42748

Sold To: INTEGRIS METALS, LTD.
7910 4TH STREET SE
CALGARY, AB T2C2Y3

Ship To: ***CUSTOMER PICKUP***
4375 14TH STREET NORTHEAST
CALGARY
ABT3E7A9

Vendor Information

Cust PO #: 406824

Cust PO DT: 11/03/05

Specifications

STAINLESS STEEL SHEET, COLD ROLLED, ANNEALED AND PICKLED.
ASTMA240/04a 480/04a, 666/03, ASMESA240/04-A05, 480/04-A05, SA666/04
Q08766D-A X 1/8 PRM, AMS5513H X MKK&FIN, MIL5059D, AMD3, X CRWN MEAS
CORROSION: ASTM A262/02aE; 180Bend-OK
Buyer Part: 4288441
304 2B .1305 IN 48 IN 96 IN
Country of Origin: UNITED STATES

Mechanical Tests

		UOM	L	O		UOM	L	O
Yield Strength - 0.2% Offset	40	KSI	F	TRANSV				
Tensile Strength (UTS)	93.3	KSI	F	TRANSV				
Rockwell B	85		F	TRANSV				
Pct Uniform Elong 2 In/50mm	57.01	PCT	F	TRANSV				
Rockwell A	85		T	TRANSV				

Chemical Composition

C Carbon-Pct	.059	CR Chromium-Pct	18.360
CU Copper-Pct	.342	MN Manganese-Pct	1.643
MO Molybdenum-Pct	.285	N Nitrogen-Pct	.037
NI Nickel-Pct	8.150	P Phosphorus-Pct	.029
SI Silicon-Pct	.289		

Comments

MATERIAL TEST REPORT

From: NORTH AMERICAN STAINLESS CANADA, IN
740 IMPERIAL ROAD NORTH

Page : 2
Heat/Lot : 86K8
TIN : B42748

Material free from mercury contamination. No weld repairs.
EN 10204 3.1 PED 97/23/EC Annex1, Para. 4.3 Q08763F Cond A
This document certifies the material has been tested in
accordance with applicable specifications described herein
and has met those requirements.

QA by ERIC HESS 02/01/2006

Miscellaneous Data

GUELPH, ONT. K123
Control #: SC60214
Part #: 74271441
.135 X .48 X .96

Date: 03/17/06

SOLD TO: INDS. LASER

70 110880

S/P 90-374786 - 02

[Signature] 3/17/06

The Chemical Analysis and Mechanical Test
data was received via EDI from the above
mentioned vendor.

INTEGRIS METALS, LTD.